

1 WHAT IS CLAIMED IS:

2
3 1. A method for treating a target tissue within an intervertebral
4 disc, comprising:
5 a) forming a void in at least close proximity to the target tissue; and
6 b) delivering a preheated fluid to the void, wherein the fluid is
7 preheated to a temperature in the range of from about 45°C to 90°C, and at least a
8 portion of the target tissue undergoes contraction due to heat exchange between the
9 target tissue and the fluid.

10
1 2. The method of claim 1, wherein the temperature of the target
2 tissue is increased to a treatment temperature due to the heat exchange between the
3 target tissue and the preheated fluid, wherein the treatment temperature is in the range
4 of from about 45°C to 90°C.

5
1 3. The method of claim 2, wherein the treatment temperature is in
2 the range of from about 60°C to 70°C.

3
1 4. The method of claim 1, wherein the target tissue comprises
2 nucleus pulposus tissue.

3
1 5. The method of claim 1, wherein the target tissue lies adjacent to
2 the annulus fibrosus.

3
1 6. The method of claim 1, wherein the target tissue lies adjacent to
2 an annular fissure of the disc.

3
1 7. The method of claim 1, wherein said step a) comprises ablating
2 disc tissue components using an electrosurgical probe.

3
1 8. The method of claim 7, further comprising:
2 c) prior to said step b), manipulating the electrosurgical probe such that
3 the void is sculpted to a suitable size and shape.

9. The method of claim 7, wherein said step b) comprises delivering the preheated fluid to the void via a fluid delivery unit, wherein the fluid delivery unit is integral with the electrosurgical probe.

10. The method of claim 7, wherein said step b) comprises delivering the preheated fluid to the void via a fluid delivery system, wherein the fluid delivery system is separate from the electrosurgical probe.

11. The method of claim 1, wherein said step b) comprises delivering saline to the void, the saline at a temperature in the range of from about 60°C to 70°C.

12. The method of claim 1, wherein said step b) comprises delivering the preheated fluid to the void at a regulated rate, and the method further comprises:

d) withdrawing the fluid from the void, whereby the fluid is circulated through the void at a substantially constant temperature.

13. A method for treating an intervertebral disc, comprising:

- a) forming a void in at least close proximity to a target tissue within the intervertebral disc; and
- b) delivering a preheated fluid to the void, wherein at least a portion of the target tissue is heated to a temperature in the range of from about 45°C to 90°C, whereby collagen fibers within the target tissue undergo shrinkage.

14. The method of claim 13, wherein at least a portion of the target tissue is heated to a temperature in the range of from about 60°C to 70°C.

15. The method of claim 13, wherein the target tissue is heated via heat exchange between the preheated fluid and the target tissue.

16. The method of claim 13, wherein said step a) comprises forming a void in the nucleus pulposus.

3

1

17. The method of claim 13, wherein said step a) comprises:

2

c) positioning an active electrode terminal of an electrosurgical probe

3

within the disc at a location in at least close proximity to the target tissue; and

4

d) applying a high frequency voltage between the active electrode

5

terminal and a return electrode.

6

1

18. The method of claim 17, further comprising:

2

e) during said step d), manipulating the electrosurgical probe such that

3

the void is sculpted to a suitable size and shape.

4

1

19. The method of claim 17, wherein said step b) comprises

2

delivering the preheated fluid to the void via a fluid delivery system, the fluid delivery

3

system separate from the electrosurgical probe.

4

1

20. An electrosurgical apparatus, comprising:

2

a shaft having a shaft distal end;

3

an electrode assembly at the shaft distal end;

4

a fluid delivery unit including a fluid delivery tube; and

5

a fluid source unit coupled to the fluid delivery tube, the fluid source unit

6

providing a fluid at a controlled temperature to the fluid delivery unit, wherein the fluid

7

source unit includes a fluid reservoir and a temperature control unit coupled to the fluid

8

reservoir.